

**DOCKET NO.:** HENK-0060 (H4714)  
**Application No.:** 10/774,018  
**Office Action Dated:** March 21, 2008

**PATENT**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. - 78. (canceled)

79. (Currently amended) A cleaning agent comprising  
a chimeric amylolytic protein comprising an amino acid sequence that is at least 95 % 98 % identical to the amino acid sequence set forth in SEQ ID NO:8 an amino acid sequence consisting of one or more segments of contiguous amino acids of the *Bacillus amyloliquefaciens*  $\alpha$ -amylase set forth in SEQ ID NO:4 fused to one or more segments of contiguous amino acids of the *Bacillus licheniformis*  $\alpha$ -amylase set forth in SEQ ID NO:2,  
wherein each terminus of the segments of contiguous amino acids of the *Bacillus amyloliquefaciens*  $\alpha$ -amylase is, independently, located at position 1, 17, 19, 34, 76, 84, 99, 108, 112, 142, 147, 149, 151, 153, 163, 174, 179, 185, 191, 198, 201, 207, 231, 234, 244, 256, 263, 276, 429, 431, 433, or 483 of SEQ ID NO:4 and each terminus of the segments of contiguous amino acids of the *Bacillus licheniformis*  $\alpha$ -amylase is, independently, a position in SEQ ID NO:2 that is homologous to one of the termini of the segments of contiguous amino acids of the *Bacillus amyloliquefaciens*  $\alpha$ -amylase in SEQ ID NO:4.

80. (Currently amended) The cleaning agent of claim 79, wherein the chimeric amylolytic protein comprises an amino acid sequence that is at least 99 % identical to the amino acid sequence set forth in SEQ ID NO:8 AL17, AL108, AL142, AL147, AL149, AL151, AL163, AL174, AL179, AL185, AL191, AL198, AL207, AL231, AL234, AL244, AL263, AL276, AL431, ALA17-151, ALA76-151, ALA99-429, ALA112-151, ALA112-201, LA19 or LA431.

81. (Currently amended) The cleaning agent of claim 79, wherein the chimeric amylolytic protein comprises an amino acid sequence that is at least 98 % identical to the amino acid sequence set forth in SEQ ID NO:6 or SEQ ID NO:10 AL34 (SEQ ID No. 6), AL256 (SEQ ID No. 12), ALA34-84 (SEQ ID No. 14) or LAL19-153 (SEQ ID No. 18).

82. (Canceled)

83. (Currently amended) The cleaning agent of claim 79, wherein the chimeric amylolytic protein comprises an amino acid sequence that is at least 99 % identical to the amino acid sequence set forth in SEQ ID NO:6 or SEQ ID NO:10~~98%, 99%, or 100% identical to AL112 (SEQ ID NO: 10)~~.

84. (Currently amended) The cleaning agent of claim 79, wherein the chimeric amylolytic protein comprises an amino acid sequence that is identical to the amino acid sequence set forth in SEQ ID NO:6, SEQ ID NO:8, or SEQ ID NO:10~~at least 98%, 99%, or 100% identical to LAL19-433 (SEQ ID NO: 10)~~.

85. (Previously presented) The cleaning agent of claim 79, wherein the agent comprises from 0.000001 percent by weight to 5 percent by weight of the chimeric amylolytic protein.

86. (Previously presented) The cleaning agent of claim 79, further comprising one or more other amylolytic proteins.

87. (Previously presented) The cleaning agent of claim 79, further comprising one or more proteases, lipases, β-glucanases, or cellulases.

88. (Previously presented) The cleaning agent of claim 79, wherein the agent comprises more than one phase.

89. (Previously presented) The cleaning agent of claim 79, wherein the agent is solid and at least two different solid components, powders, granules, or extrudates are present in the agent in a loose mixture.

90. (Previously presented) The cleaning agent of claim 79, wherein at least two solid phases that are bonded together are present in the agent.

91. (Previously presented) The cleaning agent of claim 88, wherein at least one of the phases comprises an amylase-sensitive material or a starch.

92. (Previously presented) The cleaning agent of claim 79 further comprising one or more components that stabilize the amylolytic activity of the amylolytic protein or increase the contribution of the amylolytic protein to the washing or cleaning performance of the agent.

93. (Previously presented) The cleaning agent of claim 92, wherein the agent is in liquid, gel, or paste form and one of the components of the agent is encapsulated, either individually or together with one or more of the other components of the agent.

94. (Previously presented) A method for cleaning textiles or hard surfaces, comprising cleaning a textile or a hard surface with the cleaning agent of claim 79.

95. (Previously presented) The method of claim 94, wherein the amylolytic protein is used in the cleaning agent in an amount of from 0.01 mg to 400 mg per application.

96. (Previously presented) The method of claim 94 wherein the cleaning agent comprises more than one phase.

97. (Currently amended) A method for improving the washing or cleaning performance of a cleaning agent comprising adding to the agent a chimeric amylolytic protein comprising an amino acid sequence that is at least 95 % 98 % identical to the amino acid sequence set forth in SEQ ID NO:8 ~~an amino acid sequence consisting of one or more segments of contiguous amino acids of the *Bacillus amyloliquefaciens*  $\alpha$ -amylase set forth in SEQ ID NO:4 fused to one or more segments of contiguous amino acids of the *Bacillus licheniformis*  $\alpha$ -amylase set forth in SEQ ID NO:2,~~  
~~wherein each terminus of the segments of contiguous amino acids of the *Bacillus amyloliquefaciens*  $\alpha$ -amylase is, independently, located at position 1, 17, 19, 34, 76, 84, 99, 108, 112, 142, 147, 149, 151, 153, 163, 174, 179, 185, 191, 198, 201, 207, 231, 234, 244, 256, 263, 276, 429, 431, 433, or 483 of SEQ ID NO:4 and each terminus of the segments of contiguous~~

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amino acids of the *Bacillus licheniformis*  $\alpha$ -amylase is, independently, a position in SEQ ID NO:2 that is homologous to one of the termini of the segments of contiguous amino acids of the *Bacillus amyloliquefaciens*  $\alpha$ -amylase in SEQ ID NO:4.